Phonotactic Changes in English Words Natized in Dholuo

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Abstract: *This paper investigates the phonological changes in English words nativized in Dholuo.The infiltration of English words into Dholuo lexical inventory has led to the adoption and subsequent nativisation of English words by the native Dholuo speakers. During nativisation, the loanwords undergo a number of phonological changes which enable the borrowed word to be fully nativized in agreement with Dholuo phonotactic structure. The mechanism used by Dholuo language in the phonological modification of loanwords has been explained within the framework of Optimality Theory, a linguistic model which proposes that observed forms of language arise from the interaction between conflicting constraints. It is through the interaction of markedness and faithfulness constraints that the output forms – the nativized words – are realized. Data for this paper was collected through participant observation and use of an audio recorder in Kisumu County. The paper has revealed that Dholuo alters the phonotactics of the borrowed words through foreign phoneme integration, vowel accommodation, consonant accommodation and consonant strengthening.*
Key Words*: Dholuo,Nativization, Phonotactic changes, English words*

I. Introduction

Dholuo is part of a group of Nilotic languages which are collectively referred to as the Luo whose craddleland historians and linguists have located around Wau, along River Sue and Jur in the open grasslands plain of Bahr-el-ghazal province of Sudan (Owino, 2003:11) Currently, Dholuo speakers live in the Nyanza region of western Kenya along the eastern shores of Lake Victoria, predominantly in Siaya, Kisumu, Homabay, and Migori counties. The Luo people in Kenya neighbour the Luhyia community on the Northern side of Lake Victoria, the Nandi community and the Kipsigis community on the Eastern side, and the Kuria people and the Abagusii on the Southern side. (Owino 2003:11).Dholuo has two regional varieties namely:
a. The Trans-Yala dialect which is spoken in Ugenya, AlegoYimbo and parts of Gem
b. The South Nyanza dialect which is spoken in various locations of south Nyanza area plus those parts of Siaya and Kisumu not included in the Trans-Yala Group.
The south Nyanza variety is the one regarded as standard, as it is the one that is found in the bulk of the literature in Dholuo including the Bible and the readers used in schools. It is also the dialect on which this paper is based and any reference to Dholuo is referring to the south Nyanza dialect.
Dholuo adopted vocabulary used in the new institutions borrowed from the colonizers. The political and linguistic contact between the Luo people and the British during this period resulted in the natural interaction of the two languages in a diaglossic scenario, where English was a high variety and Dholuo a low variety. The British first came as missionaries and introduced Christianity and formal education among the natives.This contact led to borrowing, and since English was a high variety language whilst Dholuo was a low variety. The direction of borrowing was therefore to Dholuo language.

When imported from a source to a borrowing language, loanwords may often contain structures that violate the phonological well-formedness constraints of the borrowing language. Thus, Loanword phonology involves the intricate interplay between forces that require the loan to conform to native grammar segmental and phonotactic constraints on the one hand, while at the same time remaining faithful to the loan source on the other. The recipient language thus typically modifies the new items in keeping with the pre-existing structure of the language. (Katamba,1993).

This paper discusses how the phonological orientations of English words nativized in Dholuo are altered to adhere to the phonemic patterns in Dholuo within the tenets of the optimality theory.Omachonu (2007) points out that in the framework of Optimality Theory, surface phonology is held to be the result of constraints that enforce stated relationships between inputs (underlying representations) and outputs (surface forms).

In the nativization of loanwords, although an infinite number of candidates are generated from the input, only one candidate is selected as the optimal output form. The basic concept of OT is that languages contain constraints that are always in conflict.The constraints are universal but languages basically differ in their

ranking of various faithfulness and markedness constraints. In the nativization of Dholuo loanwords from English, some constraints are violated while others are satisfied. Kager (1999:3) points out that `the violation of a constraint is not a direct cause of ungrammaticality, nor is absolute satisfaction of all constraints essential to the grammar's outputs'. What determines the best output is the least costly violation of the constraints.

II.   Methodology

Research Design

This paper adopted a descriptive approach to analyze the English words nativized in Dholuo language. Mugenda and Mugenda (1999) point out that a descriptive research determines and reports the way things are. Descriptive studies help to generate hypotheses as opposed to testing them. This design suits as the focus of this paper mainly concentrated on the description of the phonotactic changes involved in the nativization of English words in Dholuo within the framework of Optimality Theory.

Target Population

The target population was the native Dholuo speakers of the South Nyanzadialect. This target population is dialect specific to allow for consistency of the data. The research targeted an urban populace from Nyalenda, a working suburb in Kisumu-Kenya. Kisumu City is the headquarters of Kisumu County and it is regarded as the heartland of Dholuo speakers. This group was targeted because of their urban residence, with their daily lives centered on the urban activities: using the buses for going to work, buying provisions at the supermarket, transporting children to and from school each day. This kind of daily urban activities enabled a high propensity for the people of Nyalenda to use terminology in the sciences and technology, and thus provide several instances of borrowing.

In Nyalenda, the researcher purposefully sampled three football video dens, three restaurants and three chief baraza sessions. The researcher also visited two markets and three churches within Kisumu central sub-county. These places were targeted because of their social ambience for interaction and socialization among respondents of diverse occupations, origin and residence. This diversity propelled the tendency of use of loanword from various semantic fields in their interactions. The researcher also targeted Dholuo FM radio stations. The choice of the radio stations was informed by the fact that the radio presenters are likely to use many nativized words due to the nature of materials they broadcast and advertise.

Sampling Techniques and Sample Size

The current research utilized both purposive and random sampling techniques to select a representative sample. Out of the four FM radio stations that broadcast in Dholuo: Ramogi, Mayienga, Nam Lolweand Lake Victoria, the researcher purposively selected the last two. A pre-research survey in Kisumu town had established that the two FM radio stations have the best reception besides having extensive news coverage, interactive programs and detailed advertisements.

The research also used purposive sampling in identifying market centers, football video hubs churches and chief barazas. Out of the many markets in Kisumu County, the researcher visited *chiga market* and *okonyowelo.* The choice of the markets was informed by the predominant language of trade: South Nyanza dialect of Dholuo. Purposive sampling also informed the choice the three churches: Inland Church of Christ-Pandpieri, first mass of St Theresa Catholic Church- Kibuye, and St Marys ACK- Chiga. The choice of these churches was informed by the fact that they have a provision for sermons conducted in Dholuo language. Random sampling was utilized in sampling of areas to visit in Kisumu. In selecting the informants, purposive sampling was utilized. The researcher selected informants who had the required information.

Methods of Data Collection

Participant-Observation was used to collect data for this paper. An audio recorder was also used to record the articulation of the lexical items for purposes of transcription

Data collection process

The researcher participated openly in the daily lives of the participants as a football fan in the three football video hubs. This instrument was used to collect data from the three football video hubs, three restaurants, and the two market centers.

At the football video hubs the researcher actively engaged in informal conversation with the football funs for 15 minutes during the half time break of the English Premier League match bylistening and also questioning the respondents on their analysis and commentary of the first half and projections for the final half. The researcher did this for three matches every weekend for a period of 3 weeks for each of the three football video hubs.

The researcher assumed the role of a customer in the markets already sampled above. The respondents in this case were traders and sellers of various goods and commodities. The researcher purposeful sample 5 respondents in each of the three market days he visited each market center. The researcher for example purposively sampled a respondent in *OkonyoWelo Market* selling household wares and was very informative. The respondents were engaged in unofficial talks about the commodities they deal in for about 20 minutes.

Data Collection Tools
An audio recorder was used as a too to collect data for this paper.
The researcher in the churches audio recorded sermons given by the priest and pastors on Sundays in the three churches already purposefully sampled. The recordings were done three times for three consecutive Sundays. The recordings were later replayed to identify any loanword that could have escaped the attention of the researcher during the field recording. The recordings were used to enhance the accuracy of transcription of the loanwords identified during analysis.
The researcher also used the audio recorder to record programs from both Nam Lolwe FM and Radio Lake Victoria FM. The researcher tuned to the two FM stations and tape-recorded 5 news bulletins, 5 radio programs and 10 advertisements

Discussion of research findings
The phonological modifications during nativizationaffect the phonotactic structure of the English words as they are borrowed from English into Dholuo. This is due to the disparity in phoneme inventory of Dholuo and English. The phonotactic changes are discussed as phonemic preservation, integration of foreign phonemes,phonemic merger and integration of foreign phonemes.

Phoneme preservation
English and Dholuo do not have exactly the same sound patterns. There are however, a number of phonemes that are found in both languages. The data showed that these similar phonemes are preserved during nativization as they are equivalent.Sounds are presumed equivalent if there is correspondence in the phonetic property. Nasals and approximants in the data have shown high degree of phonemic preservation. The approximants [w,j,r.l] are regularly preserved in English words nativized in Dholuo language.
1.   History /histri/ - histori/ histori/
2.   driver /dr□ iv□ / → dereba /dereba/
3.   culvert /k□lv□ t / → kalabat kalabat/
4.   veranda / v□ r□nd□ / → baranda / baranda /
5.   frame / freim / → firem / firem/

The data show nasals often in word final position or in the environment of vowels. These phonetic environment are argued to contribute to phonetic preservation, to this Jensen (1993) says in this environment, the nasals are not exposed to the neutralizing force of phonemes accorded greater phonemic strength. Other consonants that are not present in Dholuo are modified to the nearest consonant in Dholuo as described below.

Integration of foreign Phonemes
The phonemes not in the phonemic inventory of Dholuo are nativized in different ways hence introducing a number of phonological changes as discussed below.
The voiced labio-dental fricative /v/ does not exist in Dholuo phoneme inventory. When it comes to the language through loanwords /v/ is integrated as the bilabial stop /b/ as in the words below
6.   driver /dr□ iv□ / → dereba /dereba/
7.   culvert /k□lv□ t / → kalabat /kalabat/
The bilabial stop /b/ does not occur in word final position in Dholuo. When the voiced labio-dental fricative /v/ occurs in word final, then the voiceless counterpart /f/ is preferred to /b/ as in the examples below.
8.   stove /st□ □v/ → sitof /sit□f/
9.   Reserve /risa:v/ - risaf /risaf/
There is however an exception to this rule is the nativization of [television] where /f/ is preferred to [b] yet /v/ in the loanword is in the word medial position. This rendering is plausible as Dholuo has only one labial fricative, it would be natural derivation of /v/ hence the /f/ seen below
10. Television /televi□n/   telefison/ telefison/
Secondly, the voiced alveolar fricative /z/does not exist in Dholuo phonemic inventory. The data shows that the voiced alveolar fricative /z/ is realized as the voiceless alveolar fricative /s/ in the English words nativized in Dholuo. This is exemplified below
11. Blouse/ blauz/- blaos /blaos/

12. diesel / di:zl / → disel / disel/
13. Gazette/ gazet/ - gaset /gaset/
14. Reserve Reserve /risa:v/ - risaf /risaf/

Thirdly, the voiceless alveolar fricative /ʃ/ does not exist in Dholuo. When it enters into Dholuo through loanwords, it is realized as the voiceless alveolar fricative /s/, which is the closest phoneme to it auditorily as in the examples below

15. machine /m□ʃi:n/→masin /masi:n/
16. bishop /biʃ□p/ → bisop / bisop/

The phoneme /l/ exist in the Dholuo phoneme inventory and therefore many a times has phoneme preservation and therefore is adopted as shown in the examples below

17. Balloon / b□ lu:n/- balun /balun/
18. Shillin /ʃili□/- siling /sili□/
19. lady / leidi / → ledi / ledi /

The data has however shown the realization of /l/ as /r/. The examples below indicate the realization of /l/ as /r/

20. Salute /s□ lu:t/-Sarut /sarut/
21. rosary / r□□z□ ri/ → losari / losari/
22. Blanket /bl□nkit/ -Baranget   /baranget/

Consequently the data in this paper has indicated two loanwords where the English /b/ is prenasalized in the loanword thus being rendered as /mb/. This occurs in the two words bomb and blue as illustrated below

23. blue / blu: / → mbulu /mbulu
24. bomb /b□m /→: mbom /mbom/

The insertion of /m/ leads to the realization of Dholuo homograph /mb/, this can be attributed to the strong rounding of /u/ leading to the prenasalization of /b/ for blue / blu: / → mbulu /mbulu. The prenasalization of /b/ to /mb/ in the word bomb can however be due to progressive assimilation.

Consonant strengthening

This is a linguistic process in which a sound with a single segment is replaced with a sound with two segments which is considered as one. Dholuo syllable structure can be strengthened by the combination of nasal and consonants in the syllable onset or coda. The two elements of the prenasalised stop must agree for the feature [voice] and their place of articulation must also be the same. Consonant strengthening is very productive in Dholuo; some of the loanwords that have undergone consonant strengthening are listed below

1. company /k□mp□ nǐ → kambi/k□mbi /
2. tank /t□nk/---tangi /tangi/
3. bank/ b□nk/---bengi/ bengi/

Vowel cluster accommodation

Dholuo as indicated earlier, although it has vowel sequence in its inventory, it does not often allow vowel sequence on English words nativized in Dholuo. The data in the current study shows that Dholuo. The nativized words form English into Dholuo that have vowel sequence are either tolerated or moderated to approximate native vowel system. The data in the current study indicated the accommodation of diphthongs of [au] and [ai].below are the examples of the accommodated but slightly modified vocalic sequence.

Accommodation of [au]

1. blouse /blauz/--- bilaos /bilaos/
2. gown /gaun/ --- gaon /g□□n/
3. Scout/ sk□□t/---sikaot /sikaot/
4. Compound /k□mp□□nd/----kompaond /kompa□nd/

Accommodation of [ai]

1. File /fail/---fael /fael/
2. Style /stail/---stael /stael/
3. Mile /mail/---mael /mael/
4. Tie /tai/---tae /tae/
5. Line /lain/--/laen/
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The accommodation of the vowel sequence violates the markedness constraint *COMPLEXvow-which forbids vowel sequence. In this case the violation of this markedness constraint is not fatal as the recipient

language [Dholuo] accommodates the vowel sequence. The accommodation of these diphthongs can be attributed to extreme degree of aperture between the constituent segments and the fact that they contain the most common vowels in the language.

Consonant-Cluster Accommodation

The markedness constraint *COMPLEX which forbids consonant cluster in the highest ranked in the tableau of violation of Dholuo. Three loanwords were nevertheless fully incorporated into Dholuo without breaking the C-cluster. Dholuo shows consonant cluster accommodations in the following domains

Obstruent followed by liquids
1. bottle / b□t.l□/ → botilo /botlo/
2. batterys / bæ.tri / → batri / batri /
3. christmas/krismas/ -krismas /krisimas/
4. christ /kraist/ → kristo /kris.to/
5. taxi /tæksi/ → taksi /taksi/
6. spirit/spirit/--spirit /spirit/
7. clinic /klinik/-- klinik /klinik/

[s] Preceded or followed by a voiceless stop
4. Marks /ma:ks/---maksi /maksi/
5. Poster /po□st□ /----posta /posta/
6. Hospital /h□spitl/---osiptal/osipta/
7. Plastic /pl□stik/----plastik /plastic

Nasal followed by [s]
1. attention /□ ten̥n/---atenson /atenson/
2. helicopter /helik□pt□ /---elikopta /elik□pta/
3. conductor /k□ nd□kt□ /---kondakita /kondakta/

Although the loanwords violate *COMPLEX, they satisfy DEP-IO (Dependent-input/output) as they do not insert vowels to break the consonant cluster. By retaining the consonant clusters, the outputs strive as much as possible to remain faithful to the input. Mwita (2009) using the example of the English word s*quare* which is accommodated in Kiswahili language observes that sometimes prestige may override well-formedness. He points out that, although the recipient language (Kiswahili) has a mechanism of adapting new words, sometimes not all syllables are repaired; there is a high level of tolerance. However, from the findings of this research it is observed that Dholuo is not so much susceptible to illicit consonant clusters within the syllable as only very few words were found to have retained the phonotactics of the lending language.

III.   Conclusion

The paper has shown that the phonological processes operating on the loanwords initiate a number of phonotactc changes on the loanwords to make them familiar and acceptable by Dholuo speakers**.** The study identified integration of foreign phonemes, consonant strengthening, vowel cluster accommodation and consonant cluster accommodation.Some segments are however preserved due to correspondence in the phonetic property. The integration of foreign phonemes enable the realization of English phonemes not found Dholuo phonemic inventory to be realized as their closest equivalence in Dholuo with respect to both articulatory and orthographic property. Consonant strengthening also alters the phonotactic of a number of English words nativized in Dholuo. Dholuo avoids codas and consonant clusters by all means but other factors like religious 'faithfulness' has made the recipient language tolerate foreign consonant clusters. The conflicting demands between faithfulness constraints and markedness constraints in the nativization process produce phonological structures not found in the indeginous Dholuo language. Nevertheless, such structures help to fill in the existing gaps in the language as a result of language growth and development.

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